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## ORIGINAL

### COEDUCATIONAL IDEAS OF PHYSICAL EDUCATION TEACHERS: PSYCHOMETRIC PROPERTIES OF A SCALE

### PENSAMIENTO COEDUCATIVO DEL PROFESORADO DE EDUCACIÓN FÍSICA: PROPIEDADES PSICOMÉTRICAS DE UNA ESCALA

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## ABSTRACT

The absence of questionnaires or scales which will assess different coeducational aspects that are characteristics of a PE teacher, as well as the need to know their perception about such model, constitute the aim of this study, which was the evaluation of the psychometric properties using a tool called the Scale of coeducational ideas in PE teachers, in order to assess the different opinions about coeducation and the methodology used in their classes. The sample was composed by 213 teachers, 133 men and 43 women. The Scale was sent in a hard copy, in electronic format and through the moddle platform. The data analysis shows appropriate results in terms of factor structure, internal consistency and validity types. It is concluded that the Scale is a valid and reliable instrument to analyse the coeducational characteristics of PE teachers.

**KEY WORDS:** scale, coeducation, teachers, Physical Education.

## RESUMEN

Ante la falta de cuestionarios o escalas que evaluarán los diferentes aspectos coeducativos que caracterizan al profesorado de Educación Física y la necesidad de conocer cuál es la concepción que tienen sobre este modelo, se desprende el objetivo de este trabajo, como el de evaluar las propiedades psicométricas mediante un instrumento que hemos denominado Escala sobre el pensamiento coeducativo del profesorado de EF para valorar las opiniones respecto a la coeducación y la metodología que se utiliza en sus clases. La muestra estuvo compuesta por 213 profesores, 133 hombres y 43 mujeres. La escala fue aplicada mediante papel, envío de correo electrónico y plataforma moddle. El análisis de los datos muestra unos resultados adecuados en cuanto a estructura factorial, consistencia interna y tipos de validez. Se concluye que esta Escala representa un instrumento válido y fiable para analizar las características coeducativas del profesorado.

**PALABRAS CLAVE:** escala, coeducación, profesorado, educación física.

## INTRODUCTION

The importance of coeducation lies in the reasons given for its practice in the classroom. In this respect, Lillo, Brotons and Simón (2006) point out that the first reason for coeducation is to reinforce mixed teaching. Schools reproduce male culture and values, not allowing true socialisation to break the limits of ignorance between boys and girls. The dominance of the masculine model is based on factors such as rationality, abstraction and formal logic intelligence, thus forgetting elements like emotion, imagination and care. Democratic education must consider as equal certain values that are thought to be both

masculine and feminine, such as justice and care, competition and cooperation, rationality and affection, freedom and discipline.

However, nowadays there are schools where teaching of all the subjects is mixed, except for Physical Education (PE) (Castillo, Martínez-López y Zagalaz, 2010), or countries where the different cultures prohibit coeducation (Hale, 2009). On the other side, there is the vast majority of the most prestigious schools in the United States, which have embraced coeducational teaching since the 60s (Gaztambide-Fernández, 2009).

Coeducation does not only include mixed teaching; however, mixed teaching is essential for the implementation of a coeducational model (Azzarito and Solmon, 2009). The idea behind coeducation does not lie in the fact that everyone should be equal, but that everyone should be who they want to be. Thus, Salomone (2009) suggests that the differences between the two sexes should be monitored as these continue to develop, while taking into account the differences that exist within students of the same sex.

Coeducation considers several issues which are related to the psychological dimension of development: self-concept, intersex coexistence dynamics, interpersonal communication, relational ethics. What is more, coeducational teaching does not deal with the transmission of disciplinary content that students must learn, but it affects both conducts and behaviours, as well as the social structures around which human activity evolves.

The teaching staff must lead their own actions with the aim to achieve coeducation; mixed coexistence in a teaching environment does not mean that coeducation is being practised. In their study, Gray and Wilson (2006) explain that 71% of the teachers that participated in the questionnaire prefer to give their lessons in coeducation classrooms rather than in a classroom where all the students have the same sex. In addition to that, 52% of the surveyed sample find coeducation classrooms less stressful. Regarding the attention paid by the PE teaching staff to each of the sexes, Williams (1998) indicates that boys draw 68% of the teachers' attention. On the other hand, girls do not perceive less attention by the teaching staff.

This study deals with PE lessons for they represent a highly important context where coeducation can be applied, due to the obvious physical inequalities, even if it is argued that in certain contexts these differences are caused by cultural and sexual issues that encourage them. Therefore, in order to allow any necessary changes in PE lessons and favour coeducational work, PE teachers must first change their mentality. This is essential, for the consequences driven by mixed education are more pronounced in the PE field. Several studies gathered by Fasting (1989) argue that boys monopolize the game when playing team sports. They also ignore or bother girls, thus restricting their behaviour and very often ridiculing their efforts. Boys assume the leader role, which makes girls play a subordinated role and be less actively involved in physical activity

mixed situations. Such data may explain why boys and girls practise physical activities of a different kind during their adulthood. According to Soler et al. (2009), the most practised sport by women in Spain is recreation swimming, football being the most practised by men.

Several studies on the PE field point out to the importance and influence of the teaching staff as the socialising agent in the transmission of the different sex stereotypes, roles, attributions and expectations (Blández, Fernández and Sierra, 2007; Castillo et al., 2010; Del-Castillo and Corral, 2011; García-Ferrando, 2006). In that sense, Chalabaev, Sarrazin, Stone and Cury (2008) assert that teachers must find new significance areas which are not being encouraged or are being prohibited depending on sex. Teachers are therefore the key piece that must lead students' learning.

### *Objectives*

Taking into account the previous theory review, the importance of coeducation in PE lessons can now be proved. The existence of a scale to measure coeducational aspects is fundamental in order to assess the state of coeducation in PE lessons. Hence, the aim of this study is to develop a Scale of coeducational ideas in PE teachers, and assess the psychometric properties of said instrument.

## **METHOD**

### *Participants*

The research was carried out in Jaén, in the province of Andalusia (Spain). The sample comprised the PE teaching staff of all the secondary education schools of the province during the school year 2010/2011, i.e. 213 teachers (N=213), of which 172 corresponded to state schools (80.7%) and 41 were working at grant-aided public schools (19.3%), all of them practising mixed education. The sample was calculated using Fox's sample cycle (1981). In this case, no selection technique for probabilistic sampling has been adopted, since the invited sample has already been identified. The data producing sample (n=176) is considered to be representative enough for the province of Jaén, as it represents 82.6% of its population. With regards to the sociodemographic variables of the survey respondents, 133 were men (75.6%) and 43 women (24.4%). In relation to age, 39 teachers (22.2%) were not more than 30 years old. 67 teachers (38.1%) were more than 30 years old and less than 40 years old. Finally, 70 subjects (39.8%) were more than 40 years old. Of the 176 teachers that made up the sample, 42 teachers (23.9%) had teaching experience of less than 5 years, 31 teachers (17.6%) had teaching experience of more than 5 years and less than 10 years, and 103 subjects (58.5%) had teaching experience of more than 10 years.

### *Instrument*

The main reason why this instrument has been developed is the impossibility to find a scale that assesses the specific set of variables proposed in the study and that is adapted to PE teaching staff. For that purpose, survey-based research is used, as well as an *ad hoc* scale as the data collection tool.

Initially, the Scale of coeducational ideas in PE teachers was made up by 69 items, to end up with a final version with 44 items, excluding those items which refer to sociodemographic variables. Each of the 44 questions was answered following a 9-item Likert scale, ranging from 1 (Completely disagree) to 10 (Completely agree). Furthermore, a multidimensional design was proposed, which was comprised by 5 initial dimensions where it was finally decided to group the items in 3 dimensions, according to the evaluations given by expert assessors and the results obtained from the confirmatory factor analysis.

Those items that correspond to sociodemographic variables assess sex, age and experience of PE teaching staff.

The instrument is included in the Appendix.

### *Procedure*

The scale was developed in five stages, following the instructions by Ortega, Calderon, Palao and Puigcerver (2008). Firstly, the scale was based on similar previous instruments and semi-structured surveys. The devised dimensions were the result of the adaptation of these instruments to the research needs.

The second stage aimed to validate the content. For that, the scale was sent to a group of expert assessors for them to give an answer based on the highlighted criteria (Ortega et al., 2008), such as item explanation or understanding.

On the third stage, the answers given by the expert assessors were evaluated, this resulting in the modification of certain scale sections, like the omission of two dimensions and the revision of the explanation of several items. Those questions where a 90% agreement was not found by the experts were amended following the experts' instructions or removed if necessary.

On the fourth stage, a pilot test was done in order to analyse the validity of the teaching staff's understanding and the instrument's reliability (Ortega et al., 2008). Any necessary statistical tests were carried out for construct validity, therefore removing some items that hindered the instrument's reliability and that were not important enough.

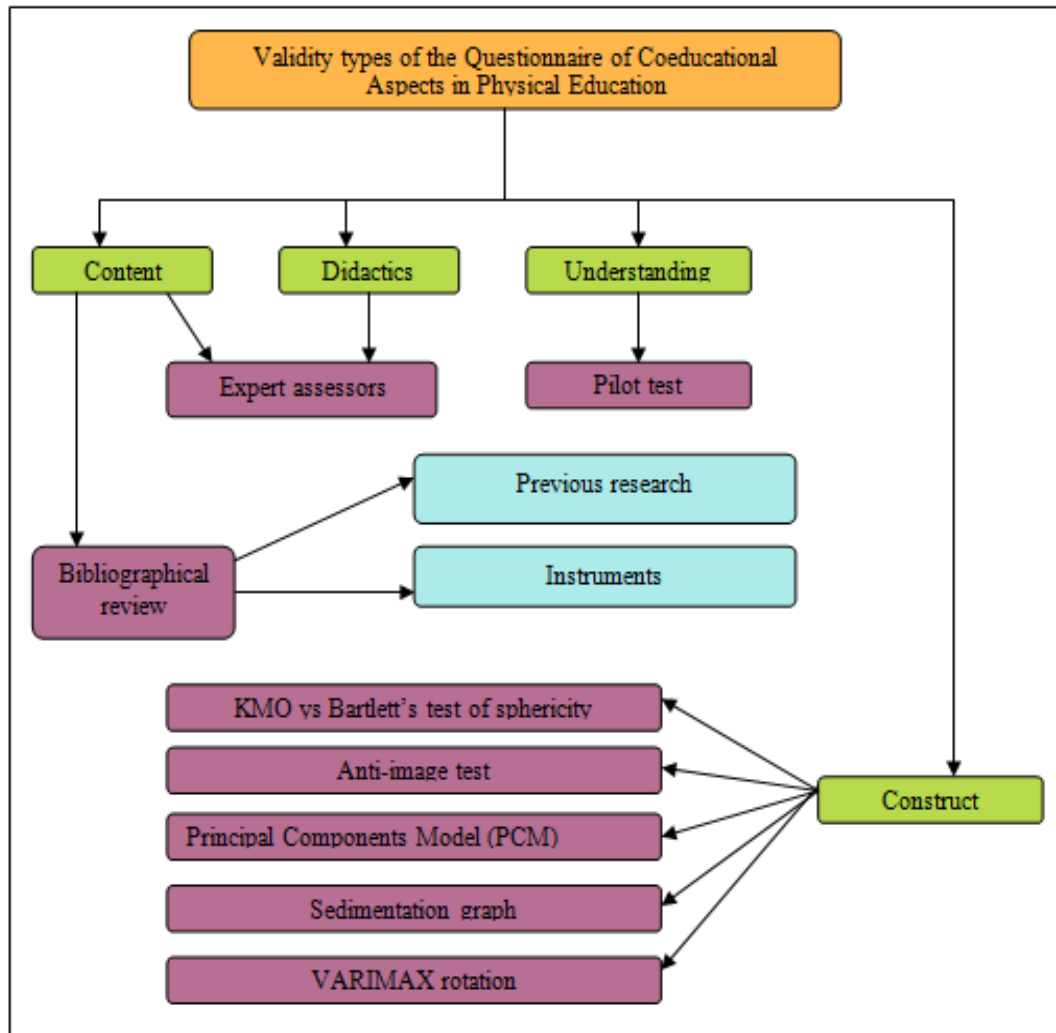
The fifth stage focused on field research, where the final sample was used. The scale's reliability was recalculated and the relevant statistical tests were done

for construct validity. Finally, the results were analysed in order to obtain the conclusions for the final design.

### Validity

The different validity types included in the following figure were obtained by means of the tests indicated below.

**Figure 1.** Validity types



With the aim to validate the content, coeducation and PE coeducation literature was reviewed. The institutional legal framework and context were considered through the assessment of Andalusia Education Act 17/2007, Royal Decree 1631/2006 and Decree 231/2007. Various instruments for the evaluation of variables similar to those proposed in the present study were found in the abovementioned review. A review of the instrument was also carried out by the expert assessors in order to validate the content. The assessors' work dealt with the critical evaluation of the initial scale, which allowed them to give an answer to certain vital components like sufficiency and representativity (Molero

and Ruiz, 2005). With this in mind, besides the amendments applied to the items explanation, they also rated every single question from the 74-item initial universe (5 sociodemographic items and 69 coeducation items) using a 1 to 10 Likert scale. They were given a research study information letter, which explained the study objectives and importance. Following the approach by Ortega et al. (2008), regarding the scale items, the membership degree to the study objectives and the precision and correction degree were recorded.

With respect to the didactic or apparent validity, the assessors group gave their opinions and suggestions about the test's external look, the scale's interest and appeal, and the text's writing and impression (Molero and Ruiz, 2005). The assessors could leave any relevant comments at the end of the scale. Such comments could be about their opinions on the importance of the proposed dimensions, the scale extent, the clarity of the language used, and the scale presentation and appeal.

According to Ortega et al. (2008), understanding validity was obtained by doing a pilot test. Understanding validity allowed to assess the extent to which teaching staff understood the different sections of the instrument. The following aspects were analysed after sending the scale to the study participants:

- 1) Understanding degree of the scale. Any recorded questions or suggestions were taken down by the teaching staff, who were asked to indicate those aspects that were not fully understood after the first reading.
- 2) Evaluation of the answers. In order to verify the understanding degree from two different perspectives: (a) analysis of the frequency of no answers for an item; (b) frequency of high-rated answers.

Regarding construct validity, a confirmatory factor analysis was carried out to assess the interdependence of variables and to offer the underlying data structure. For that, the model fitting for the number of factors was tested. No sociodemographic-related questions were included in this analysis. The goodness of fit tests, Kaiser-Meyer-Olkin (KMO) and Barlett's test of sphericity, factor extraction and rotation through the principal components model and the principal components method with VARIMAX rotation with Kaiser were performed after obtaining the data from the study sample, which will be presented in the Results section below.

### *Reliability*

Due to the nature of this study, it was not possible to calculate reliability by means of Test-Retest.

The scale's reliability was therefore calculated through coefficient  $\alpha$  (Cronbach's alpha). The extent to which the items measure the same trait with precision was obtained thanks to this coefficient, which is based on the mean correlation of all



the items (Garrido, Zagalaz, Torres and Romero, 2010). Such values will be explained later on in this study.

## RESULTS

### *Analysis of the items*

Most of the 44 items were given a minimum score of 1 and a maximum score of 10, except for items 1 and 6 (with a minimum score of 5 and a maximum score of 10), 4 and 5 (with a minimum score of 3 and a maximum score of 10), 33 and 40 (with a minimum score of 2 and a maximum score of 10), 38 y 44 (with a minimum score of 6 and a maximum score of 10), and items 34 and 41 (with a minimum score of 1 and a maximum score of 7 and 9). Typical deviations are between the maximum value of 3,347 and the minimum value of .723.

### *Analysis of reliability*

The analysis of reliability of the item measurements was estimated with Cronbach's alpha coefficient, whose value was .814, with a confidence level of 95%, therefore fulfilling the recommendations by George and Mallery (1995), Guilford (1954) and Nunnally (1978). Regarding the dimensions, the highest reliability values corresponded to dimension I "Coeducation trends and elements that affect coeducation" with a Cronbach's alpha coefficient of .821, as well as dimension II "Coeducation values and factors that affect the teaching-learning process", with a value of .766.

### *Analysis of validity*

With the aim of validating the content, a bibliographical review of the study's subject matter was done and a group of expert assessors from different Spanish universities was invited to provide a critical assessment of the instrument.

The first selection was done based on the initial 69 items. Those items that were considered as inadequate were removed. The reason for that was because they did not comply with the objectives or because they were reiterative or too many for the same objective. For that purpose, the opinion of the expert assessors, who gave different evaluations of this scale version, was a key aspect to take into account. On this stage, the assessors group gave their opinions and suggestions in relation to the didactic or apparent validity aspects.

A pilot test was next performed with the objective of obtaining understanding validity, as well as didactic validity. In the pilot test, certain items were amended according to the comments by the teaching staff.

Regarding construct validity, a confirmatory factor analysis was carried out to assess the interdependence of variables and to offer the underlying data



structure. The rest of the abovementioned tests were done after obtaining the study sample data.

The Principal Components Method (PCM) and VARIMAX rotation with Kaiser were used. The aim of the rotation was to facilitate interpretation of the factorial solution in a more simple and significant way. With this in mind, each of the items will be placed in the dimension that obtains a higher value. Three dimensions with values higher than 1 were obtained. This will be the number extracted by the system (Table 1).

**Table 1.** Total variance explained.

Component	Initial eigenvalues			Sum of the squared factor loadings		
	Variance		%	Variance		%
	Total	%		Total	%	
1	6.7	15.23	15.23	6.70	15.23	15.23
2	5	11.42	26.65	5.02	11.42	26.65
3	2.35	5.34	32	2.35	5.34	32

After that, the KMO sample adaptation measurement test and Barlett's test of sphericity were performed. The KMO test obtained a value of .740, and the 'Chi squared' in Barlett's test of sphericity showed a value of 2793.1 and a significance level of  $p=0.000$ , resulting in an identity matrix. This indicates that the factorial analysis is relevant and can provide satisfactory conclusions (Visauta, 2002). Subsequently, the Anti-image test was performed in order to establish the goodness of fit of the scale, given that the sample has normal distribution and therefore does not belong to different populations with different characteristics.

## DISCUSSION

Over the last years, studies on coeducation in PE lessons has awaken the interest of researchers in the relationship between physical activity and gender. The absence of questionnaires or scales which will assess different coeducational aspects that are characteristics of a PE teacher, as well as the need to know their perception about such model, constitute the aim of this study, which was the evaluation of the scale's psychometric properties, in order to assess teaching staff's opinions about coeducation and the methodology used in their classes.

Following this line, Martínez-Galindo (2006) states that, despite the increasing interest in defining the suitability of the coeducational contexts to ensure equal opportunities, few studies and instruments have been developed.

With respect to the first and second scale dimensions, one of the instruments that they can be compared to was the questionnaire by Mercado (2005), whose

aim is to assess the opinions of the Chilean teaching staff about mixed education in PE lessons. The instrument uses a 1 to 5 Likert scale, ranging from 1 (Completely disagree) to 5 (Completely agree) This instrument was also used by Castillo et al. (2010). The KMO test results showed a value of .86. The instrument obtained a Cronbach's alpha of .916, which confirmed its reliability. Both instruments obtained similar results.

Not all the instrument found correspond to a scale. The semi-structured interview "Coeducation in PE lessons: Related values and methodology" ("La coeducación en las clases de EF: Valores y metodología asociados") (Valdivia, 2012) deals with several coeducation aspects. The interview's validation was performed by a group of expert assessors who assessed conceptually the understanding and adaptation degrees of the writing style. The four main items in relation to teaching staff's knowledge of coeducation can be extracted from this interview.

More recently, Del-Castillo (2009) created a questionnaire about the psychosocial factors that affect gender equality in PE. The questionnaire has 74 items with multivariate answers, i.e. there are certain items with dichotomic answers (Yes, No) and some items with a 1 to 5 Likert scale. The instrument shows a high Cronbach's alpha value of .703. This instrument obtains validity by means of specific statistical tests, which are based on a pilot study and on the validation by a group of expert assessors.

With respect to dimension 3, which analyses the opinion of the teaching staff about students' perception regarding gender treatment equality or discrimination in PE, Papaioannou (1998) developed a scale that can be divided into two scales according to gender. Both scales initially included 74 items, which were later cut down to 42 and grouped in 6 dimensions that were similar for the two scales (Martínez-Galindo, 2006).

In that same sense, Cervelló et al. (2004) created the Questionnaire for Perception of Equality and Discrimination in Physical Education (Cuestionario de Percepción de Igualdad y Discriminación en Educación Física) (CPIDEF). The questionnaire was based on the categories included in a qualitative study by Del Villar (1996). The questionnaire comprises 19 items, 10 of which measure equality perception through the actions carried out in PE lessons, and the other 9 evaluate students' perception of discrimination using the same previous means. The questionnaire answers are closed answers and correspond to a 0 to 10 Likert scale. The questionnaire presented an adequate factorial structure in both Primary and Secondary Education, obtaining a Cronbach's alpha value of .82 for internal consistency in the gender treatment subscale, and a value of .78 in the discrimination subscale.

It can therefore be confirmed that the instrument has a reliability of .814, similar to that of all the previously analysed instruments that are used for different measurements, that can be considered as adequate. Similarly, with regards to

validity, it can be asserted that the tests performed established that the scale fulfills the required validity criteria.

In relation to the analysis of the coeducational trends and elements that have an impact on coeducation, it must be taken into account that PE teachers believe that mixed schools encourage coeducation. Nevertheless, certain authors like Subirats (1994) and Lillo et al. (2006) state that mixed education does not achieve gender equality and that it is necessary to make some structural changes regarding teaching staff adaptation, so that mixed schools can become coeducational and can achieve the proposed objectives.

The role of coeducation within the family has changed over the years; however, only 50% of the survey respondents agree with such statement. Family is so important that, according to Ofer (2009), it constitutes an essential pillar of people's moral formation, since students start school having certain behaviour patterns and ideas that they have previously learnt at home.

Even if presentation of the scale results is not one of the research objectives, the following results are highlighted. As indicated by items 2 and 3, there are some significant differences depending on the experience of the teaching staff. In this sense, teachers agree with item 2 "Coeducation encourages boys and girls' development on the basis of a two-gender reality", as explained by Lillo et al. (2006). On the other hand, the majority of the teaching staff do not agree with item 3 "Work on the positive aspects of each gender hardly has an impact on coeducation", and therefore do not share the same principles as Freixas et al. (1993), Martínez-Galindo (2006), and Valdivia, Sánchez, Alonso and Zagalaz (2011) do. As a consequence, it can be stated that PE teachers are aware of the fact that practising coeducation means working with two different genders, but do not agree with the need to focus on the positive aspects of each gender, such as strength and resistance in the case of boys.

Regarding the curriculum, teachers do not have a clear opinion about item 12 "Official curriculum is the basis to encourage coeducational work". The reason for that may be because, as Freixas et al. (1993) and Bonal (1997) point out, a hidden curriculum may be a decisive factor when it comes to the transmission of sexist stereotypes in the classroom. This encourages teachers to believe that, given the freedom provided by the legislation for the selection of PE school content, they can give more importance to the hidden curriculum than to the official curriculum. With respect to students' PE preferences, according to item 14 "Girls prefer to work on body expression", around 70% of the teaching staff agree with that. Del-Castillo (2009) corroborates such results, arguing that girls enjoy taking part in that kind of lessons. As for boys, as indicated in item 15 "Boys prefer games and sports", around 75% of the PE teaching staff agree with that. The previous data coincide with the results provided by González (2005), who identifies the body expression module with the female gender, and the games and sports module with the male gender.

If we continue with the factors that have an influence on the teaching-learning process (TL process), the results for item 21 "PE teachers use sexist language unconsciously" show that less than half of PE teachers do not agree with that statement. The reason for this is because there may be some discrimination of female students by PE teachers through language use, due to the underlying gender stereotypes in the Spanish language. Another reason for that may be verbal interaction with students, as explained in the studies by Mitchell, Bunker, Kluka and Sullivan (1995), and Napper-Owen, Kovar, Ermler and Mehrhof (1999), which indicate that there is higher interaction with male students than with female students in PE lessons. Again, this may be the result of the existing gender stereotypes for teachers and students (Koca, 2009).

With respect to the coeducational methodology used in PE lessons, according to item 35 "I make groups with approximately the same number of boys and girls in each group", 80% of the teaching staff act that way. The previous data differ from those by Del-Castillo (2009), whose study indicates that male teachers make groups in a different way depending on the students' gender, unlike female teachers. Koçak, Harris, Kin and Çiçek (2002) assert that, in the case of mixed groups, girls show less interaction than when the group is made up by students of the same sex.

The survey respondents in the present study argue that they do not show more interest to some students than to others, as suggested by item 38 "I pay attention to boys and girls equally". Teaching staff assure that they pay exactly the same attention to boys and girls. Williams (1998) deduces that boys draw 68% of teachers' attention, although girls do not perceive less attention on their part.

Regarding the limitations of the present study, the main exception lies in the impossibility to record the PE lessons for their subsequent analysis with an observation sheet. This had been planned to be the study's third stage; however, it could not be carried out because of the teachers' reticence.

## CONCLUSIONS

Based on the results, it is concluded that the scale shows an adequate factorial structure, internal consistence and different validity types. Thanks to that, and in answering the proposed objective, it is possible to develop a valid, reliable instrument in order to assess the coeducational characteristics of PE teachers. All in all, the Scale of coeducational ideas in PE teachers has proved to be based on the appropriate values to assess validity and reliability that are normally required in this kind of surveys. Therefore, the scale provides the scientific community with a new instrument to shed some light into the assessment of the coeducational aspects of PE teaching staff. In any case, future studies should be carried out to evaluate different samples, such as Primary School teachers.

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### *Legislation*

- Ley 17/2007, de 10 de diciembre, de Educación de Andalucía, (BOJA, 26 de diciembre de 2007).
- Real Decreto 1631/2006, de 29 de diciembre, por el que se establecen las enseñanzas mínimas correspondientes a la Educación Secundaria Obligatoria, (BOE, 5 de enero de 2007).
- Decreto 231/2007, de 31 de julio, por el que se establece la ordenación y las enseñanzas correspondientes a la Educación Secundaria Obligatoria en Andalucía, (BOJA, 8 de agosto de 2007).

**Referencias Totales / Total number of references: 42 (100%)**

**Referencias Propias de la Revista / References to this journal: 1 (2,38%)**





## APPENDIX

Questionnaire of Coeducational Aspects in Physical Education (CACEF, for its Spanish acronym) (Valdivia, 2012)

### Sociographic data:

**Sex:**     ☐ Male                      ☐ Female

Please underline your **age** range:

*Younger than 30              Older than 30 but younger than 40              Older than 40*

Please underline your **teaching experience period**:

*From 0 to 5 years    More than 5 years but less than 10 years    More than 10 years*

Please say how much you agree with the following items within a 1 to 10 scale, where the scores mean as follows:

**Totally disagree: 1,**

**Totally agree: 10**

<b>1. COEDUCATION TRENDS AND ELEMENTS THAT INFLUENCE COEDUCATION IN PE</b>	
<b>Item</b>	<b>Score</b>
1. Coeducating is a process that ensures equal treatment to boys and girls by overcoming any stereotypes.	
2. Coeducation encourages the development of boys and girls on the basis of a two-gender reality.	
3. Work on the positive aspects of each gender hardly has an impact on coeducation.	
4. Coeducation is part of the educational process.	
5. The school itself has a direct influence on the students' coeducation.	
6. The schools where I have worked have always supported my coeducational activities.	
7. I have noticed some changes in coeducation within the relationship between students throughout my teaching career.	
8. The idea of coeducation within the family has changed throughout my teaching career.	
9. I have had difficulties to put coeducation in practice, depending on the type of the activity.	
10. Throughout my teaching career I have seen changes in society which have encouraged coeducation.	
11. Coeducation is encouraged in mixed schools.	
12. The official curriculum is the basis of coeducational work.	
13. Girls ask me to do environment activities.	
14. Girls prefer to work on body expression.	
15. Boys prefer games and sports.	

<b>2. VALUES, CONTENT AND FACTORS WITHIN THE PROCESS</b>	
<b>Item</b>	<b>Score</b>
16. When putting coeducation in practice, I try to control the space for motor activities.	
17. School must be a neutral tool for the development of boys and girls.	
18. Respect encouragement has no importance in coeducation.	
19. Responsibility has no importance for students to develop coeducation.	
20. Comradeship is not valued in coeducation.	
21. PE teachers use sexist language unconsciously.	
22. There is some PE content that intrinsically encourages sexist behaviour.	
23. Television has a positive influence on coeducational behaviour.	
24. Families have made coeducation work difficult.	
25. I try to provide girls with more didactic material.	
26. Students' gender influences the assessment process.	
27. Physical improvement is different according to the sex of the students.	
28. The health and physical condition module is the boys' favourite.	
29. I use a different verbal tone with girls.	
30. I encourage boys and girls in a different way.	
31. I spend a different amount of time when correcting the exercises of boys and girls.	

<b>3. COEDUCATIONAL METHODOLOGY IN PE</b>	
<b>Item</b>	<b>Score</b>
32. I believe that equality is a fundamental aspect in coeducation.	
33. Friend relationships encourage coeducational behaviour.	
34. My work ideology identifies with one-gender schools.	
35. I make groups with approximately the same number of boys and girls in each group.	
36. I use the same linguistic expressions for all the students regardless of their gender (applicable only in Spanish).	
37. I encourage boys and girls equally.	
38. I pay attention to boys and girls equally.	
39. I take a different interest in boys and girls.	
40. I use both boys and girls as models for physical activity exercises.	
41. I suggest that girls do different activities than boys.	
42. I delegate responsibilities to boys and girls equally.	
43. I apply the same rules to boys and girls.	
44. I listen to the suggestions by boys and girls equally.	